

**FIG. 1**

NO.	ALLOYS	COMPONENTS(%)							Zn
		Si	Fe	Cu	Ti	Mn	Mg	Cr	
1	A	4.77	0.26	0.05	0.04	0.1	0.3	0.1	0.01
2	B	3.82	0.25	0.01	0.03	0.1	0.2	0.1	0
3	C	4.86	0.36	0.15	0.03	0.1	0.46	0.1	0
4	D	4.59	0.29	0.15	0.03	0.1	0.37	0.1	0
5	E	4.11	0.25	0.07	0.03	0.05	0.28	0.05	0
6	F	4.93	0.36	0.19	0.03	0.15	0.39	0.14	0
7	G	3.85	0.25	0.21	0.03	0.46	0.25	0.1	0.01
8	H	4.10	0.26	0.49	0.03	0.12	0.3	0.2	0.01
9	I	4.53	0.30	0.32	0.02	0.15	0.31	0.45	0.01
10	J	4.32	0.2	1.02	0.03	0.14	0.61	0.13	0.02

ALLOYS OF THE INVENTION

COMPARATIVE  
EXAMPLE

FIG. 2

ALLOYS OF THE INVENTION					
NO.	ALLOYS	HOMOGENIZATION TEMPERATURE (°C)	HOMOGENIZATION TIME (h)	BILLET HEATING TEMPERATURE (°C)	EXTRUSION TEMPERATURE (°C)
					ARTIFICIAL AGING TEMPERATURE (°C)
1	A	470	12	470	500
2	B	470	12	470	495
3	C	470	12	470	500
4	D	510	6	470	500
5	E	510	6	470	495
6	F	510	6	470	500
7	G	490	8	470	500
8	H	490	8	470	500
9	I	490	8	470	500
10	J	470	12	470	500
COMPARATIVE EXAMPLE					

**FIG. 3**

NO.	ALLOYS	EXTRUDABILITY (m/min)	HARDNESS HRB HARDNESS (SURFACE)	MECHANICAL PROPERTIES			COMPRESSIBILITY CRITICAL UPSETTING RATIO (%)
				TENSILE STRENGTH (MPa)	YIELD STRENGTH (MPa)	ELONGATION (%)	
1	A	5	51	285	241	10	49.2
2	B	6	36	269	214	11	51.6
3	C	5	65	324	270	11	48.8
4	D	5	56	306	274	12	47.2
5	E	6	43	265	222	13	53.9
6	F	5	57	308	270	12	43.1
7	G	5	44	272	235	11	44.5
8	H	5	48	279	238	11	49.0
9	I	5	53	293	256	12	49.8
10	J	3	64	349	274	11	40.0
ALLOYS OF THE INVENTION							
COMPARATIVE EXAMPLE							

**FIG. 4**

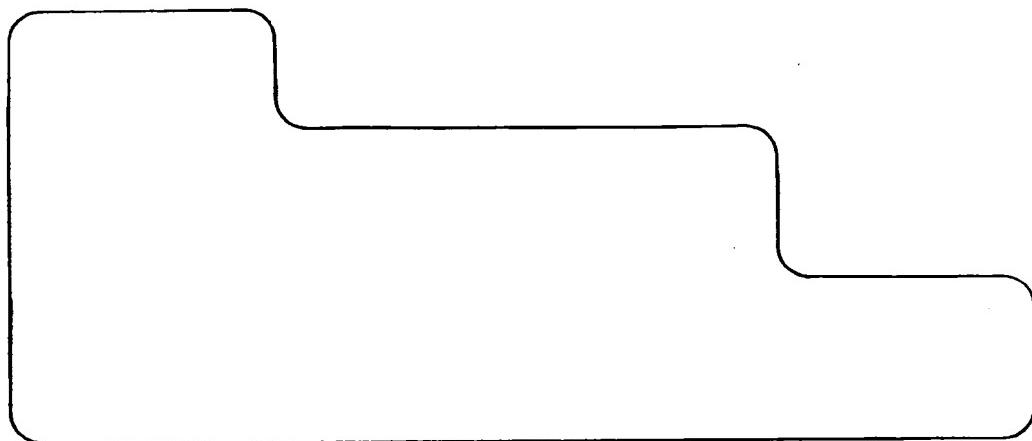
MULTIPLE REGRESSION ANALYSIS RESULT  
(STANDARDIZED PARTIAL REGRESSION COEFFICIENT)

RESPONSE VARIABLE	EXPLANATORY VARIABLE						
	S i	F e	C u	T i	M n	M g	C r
TENSILE STRENGTH	-	-	-	-0.07	-	0.93	-
SURFACE HARDNESS	0.25	-	-0.44	-	-	1.19	-
CRITICAL UPSETTING RATIO	-	-	-	-	-0.79	-0.26	-

Title: WEAR-RESISTANT ALUMINUM ALLOY EXCELLENT IN CAULKING  
PROPERTY AND EXTRUDED PRODUCT MADE THEREOF  
First Named Inventor: Nobuyuki TAKASE et al.  
Atty. Ref.: 3599-000004/US/CO

5/8

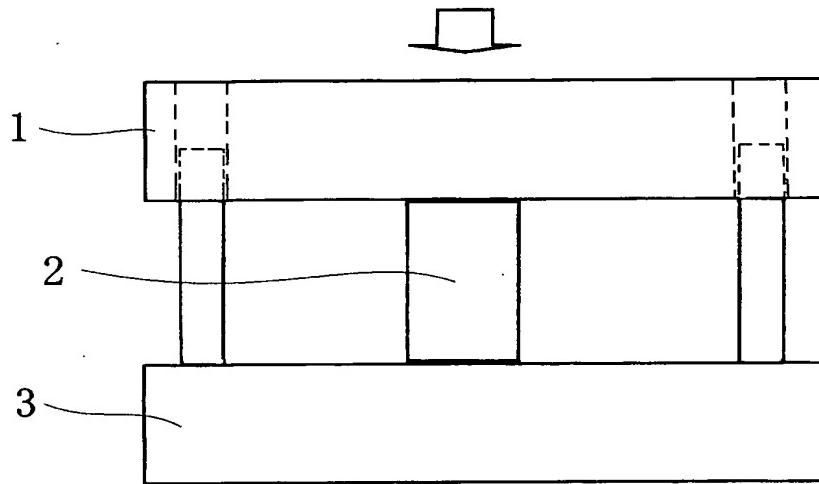
**FIG. 5**



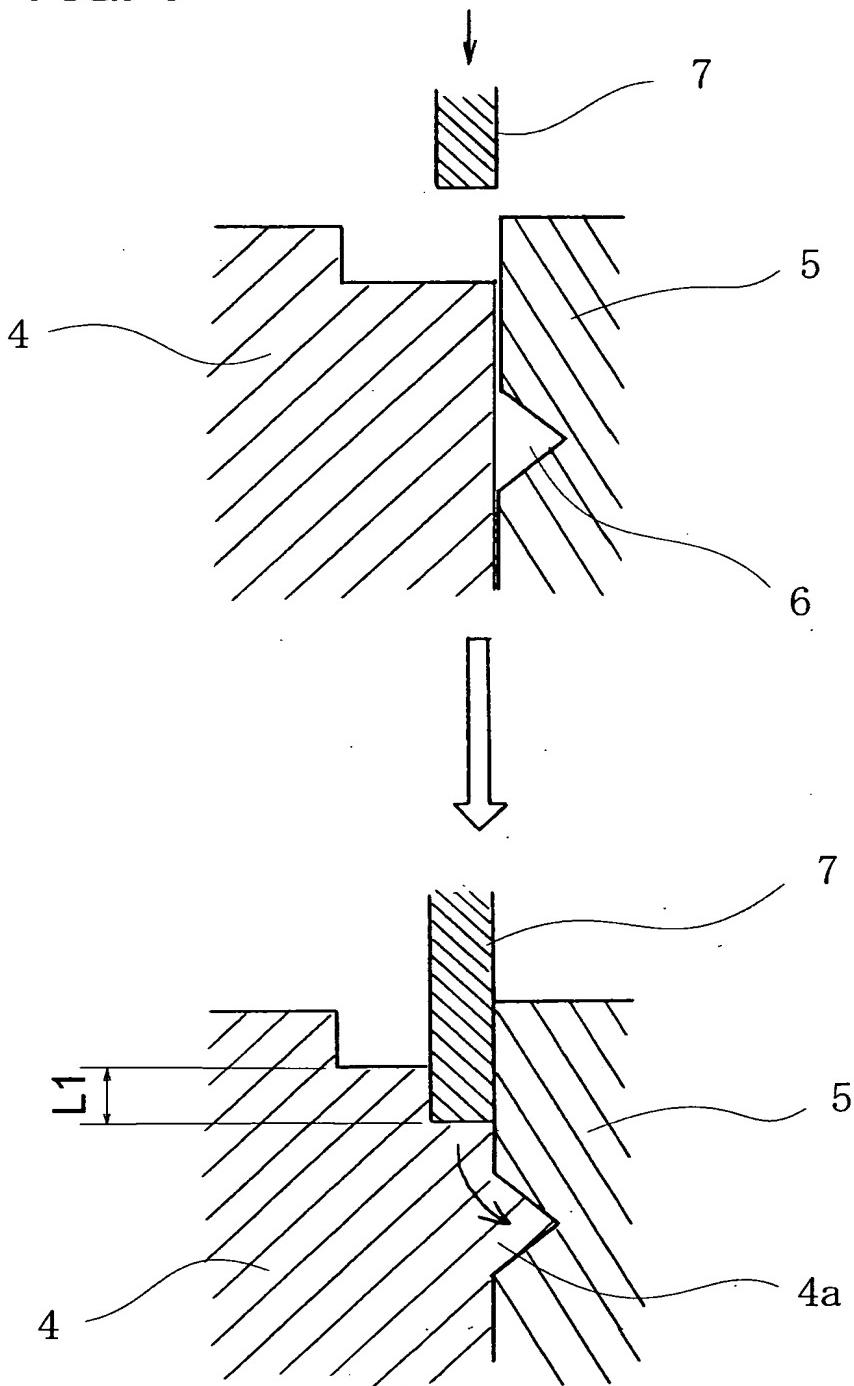
Title: WEAR-RESISTANT ALUMINUM ALLOY EXCELLENT IN CAULKING  
PROPERTY AND EXTRUDED PRODUCT MADE THEREOF  
First Named Inventor: Nobuyuki TAKASE et al.  
Atty. Ref.: 3599-000004/US/CO

6/8

**FIG. 6**



**FIG. 7**



**FIG. 8**

